WHAT IS CLAIMED IS:

1. An operational amplifier comprising:

a differential input section for generating a first signal corresponding to a differential voltage between two input signals;

an amplifying section for amplifying the first signal in voltage to generate second and third complementary signals;

a first MOS transistor connected between a first supply voltage and an output node, a conduction state of said first MOS transistor being controlled according to the second signal;

a second MOS transistor connected between a second supply voltage and said output node, a conduction state of said second MOS transistor being controlled in accordance with the third signal; and

a step-up section for stepping up the first and second supply voltages to generate a step-up voltage higher than the first and second supply voltages;

wherein said amplifying section is driven by the step-up voltage so that absolute value of the maximum level of the second or third signal becomes larger than the absolute value of the first or second supply voltage.

2. The operational amplifier as claimed in claim 1, wherein said step-up section comprises a voltage doubler rectifier circuit for generating a d.c. voltage several times as large as the supply voltage; a capacitor for storing the d.c. voltage; a node connected between said voltage doubler rectifier circuit and said capacitor; a clamper circuit for clamping a voltage at said node to a given voltage to output a given step-up voltage from said node.

3. The operational amplifier as claimed in claim 1, further comprising a shift section for shifting up the two input signals by a given voltage.

4. The operational amplifier as claimed in claim 1, further comprising a bias generating section for generating a bias voltage necessary for the respective sections.